DOCUMENT RESUME

ED 333 303 CG 023 458

TITLE	Youth and Alcohol: A National Survey. Do They Know What They're Drinking?
INSTITUTION	Office of Inspector General (DHHS), Washington, DC.
REPORT NO	OEI-09-91-00653
PUB DATE	Jun 91
NOTE	26p.; For a related document, see CG 023 457.
PUB TYPE	Reports - Research/Technical (143)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Alcoholic Beverages; *Drinking; *High School Students; *Junior High School Students; *Knowledge Level; National Surveys; Secondary Education

ABSTRACT

In response to public health concerns and the adverse health consequences of alcohol abuse, a national sample of junior and senior high school (7th through 12th grade) students (N=956) was surveyed to determine their knowledge about alcoholic and non-alcoholic beverages. Alcoholic and non-alcoholic beverages from stores close to each school were purchased, and displayed during the interview. Each student was asked whether each beverage did or did not contain alcohol, which contained the most alcohol simply by looking at the bottles, and which contained the most alcohol after reading the labels. A high alcohol-content fortified wine was included in all interviews regardless of whether it was locally available. Findings indicated: (1) two out of three students were not able to distinguish alcoholic beverages from non-alcoholic beverages; (2) in most states, beer and other malt beverage labels did not disclose alcohol content; (3) the alcohol content of beverages was a mystery to students; and (4) more than a third of all students did not that know that the high-fortified wine previously mentioned contained alcohol. Recommendations are made that the Surgeon General should work with the beverage industry, State, and Federal officials to improve the labeling and packaging of alcoholic and non-alcoholic beverages; and, consult with public and private agencies to develop, improve, and promote educational programs which would increase student awareness of alcoholic beverages and their effects. (BHK)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 233 858

OFFICE OF INSPECTOR GENERAL

YOUTH AND ALCOHOL: A NATIONAL SURVEY

DO THEY KNOW WHAT THEY'RE DRINKING?

BEST COPY AVAILABLE

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

CG023458

Richard P. Kusserow
INSPECTOR GENERAL

JUNE 1983

OFFICE OF INSPECTOR GENERAL

The mission of the Office of Inspector General (OIG), as mandated by Public Law 95-452, as amended, is to protect the integrity of the Department of Health and Human Services' (HHS) programs as well as the health and welfare of beneficiaries served by those programs. This statutory mission is carried out through a nationwide network of audits, investigations, and inspections conducted by three OIG operating components: the Office of Audit Services, the Office of Investigations, and the Office of Evaluation and Inspections. The OIG also informs the Secretary of HHS of program and management problems and recommends courses to correct them.

OFFICE OF AUDIT SERVICES

The OIG's Office of Audit Services (OAS) provides all auditing services for HHS, either by conducting audits with its own audit resources or by overseeing audit work done by others. Audits examine the performance of HHS programs and/or its grantees and contractors in carrying out their respective responsibilities and are intended to provide independent assessments of HHS programs and operations in order to reduce waste, abuse, and mismanagement and to promote economy and efficiency throughout the Department.

OFFICE OF INVESTIGATIONS

The OIG's Office of Investigations (OI) conducts criminal, civil, and administrative investigations of allegations of wrongdoing in HHS programs or to HHS beneficiaries and of unjust enrichment by providers. The investigative efforts of OI lead to criminal convictions, administrative sanctions, or civil money penalties. The OI also oversees State Medicaid fraud control units which investigate and prosecute fraud and patient abuse in the Medicaid program.

OFFICE OF EVALUATION AND INSPECTIONS

The OIG's Office of Evaluation and Inspections (OEI) conducts short-term management and program evaluations (called inspections) that focus on issues of concern to the Department, the Congress, and the public. The findings and recommendations contained in these inspection reports generate rapid, accurate, and up-to-date information on the efficiency, vulnerability, and effectiveness of departmental programs.

This report was prepared under the direction of Kaye D. Kidwell, Regional Inspector General, and Paul A. Gottlober, Deputy Regional Inspector General, Office of Evaluation and Inspections, Region IX. Participating in this project were:

San Francisco
Brad Rollin, Lead Analyst
Elizabeth Bell
Kathy Dezotte
Deborah Harvey
Jennifer Mallen
Brian Pattison
Elaine Shelub

New York
Jack Molnar
Tim Nee
Tracey Rennie

Chicago
Thomas Komaniecki
Pamela May
Ann O'Connor

Philadelphia
Donna Millan
Nancy Molyneaux

Dallas
Michelle Adams
Pamela Smith

Headquarters
Wm. Mark Krushat, Mathematical Statistician
Barbara Tedesco, Mathematical Statistician
Maruta Zitans, Program Specialist

Atlanta
Josiah Townsel

BEST COPY AVAILABLE

Department of Health and Human Services

OFFICE OF INSPECTOR GENERAL

YOUTH AND ALCOHOL: A NATIONAL SURVEY

DO THEY KNOW WHAT THEY'RE DRINKING?

Richard P. Kusserow
INSPECTOR GENERAL

OEI-09-91-00653

EXECUTIVE SUMMARY

PURPOSE

This inspection surveyed junior and senior high school (7th through 12th grade) students to determine their knowledge about alcoholic and non-alcoholic beverages.

BACKGROUND

In response to public health concerns and the adverse health consequences of alcohol abuse, Surgeon General Antonia Novello requested that the Office of Inspector General (OIG) survey youth to determine their views and practices regarding alcohol use. These concerns mirror one of Department of Health and Human Services (HHS) Secretary Louis Sullivan's goals which is to reduce the prevalence of alcohol problems among children and youth. The Surgeon General is particularly concerned about the similarities in the packaging of alcoholic and non-alcoholic beverages and young peoples' inability to distinguish between them.

Wine coolers (1.5 to 6.0 percent alcohol by volume), mixed drink coolers (4.0 percent alcohol), and malt beverage coolers (4.0 to 4.8 percent alcohol) offer consumers alcoholic beverages in a wide range of fruity flavors, vibrant colors, and attractive packaging. While not new to the 1980s, fruit-flavored fortified wines became more mainstream with the controversial marketing of Cisco (20.0 percent alcohol), which is packaged similarly to wine coolers. The Surgeon General has expressed an ongoing concern about Cisco because of its high alcohol content and potential for abuse. While containing no alcohol, mineral waters with fruit juice or flavor offer a variety of fruit flavors packaged attractively in bottles that are similar to the ones used for alcoholic coolers and Cisco.

We conducted structured interviews with a random national sample of 956 junior and senior high school students. This is one of several reports prepared by the OIG concerning youth and alcohol.

FINDINGS

Two out of three students cannot distinguish alcoholic beverages from non-alcoholic beverages

Students confuse alcoholic coolers with mineral waters that appear similar in color, labeling, and packaging. Also, some alcoholic coolers are not clearly labeled as alcoholic.

In most States, beer and other malt beverage labels do not disclose alcohol content

Although the alcohol content of beer and other malt beverages vary by State and brand, consumers cannot tell by looking at the can or bottle how much alcohol they are consuming.

The alcohol content of beverages is a mystery to students

Less than one in six students identified the beverage containing the most alcohol when shown a panel of beverages. Students were most likely to select beer and malt liquor as having the most alcohol, although Cisco contains two to five times more alcohol than either. Even after being allowed to read the labels on all cans and bottles, less than half correctly identified the beverage containing the most alcohol. This is due to (1) the students' inability to understand the labels and (2) the labels' lack of clarity.

More than a third of all students do not know that Cisco contains alcohol

Although Cisco is not available in all areas, students have found ways to obtain it. Students related stories about Cisco which emphasize not only its danger, but also its popularity.

RECOMMENDATIONS

The Surgeon General should work with beverage industry, State, and Federal officials to improve the labeling and packaging of alcoholic and non-alcoholic beverages

A coordinated effort should ensure that (1) total alcohol content of all beverages--including beer and malt liquor--is clearly displayed and understandable and (2) alcoholic and non-alcoholic beverages are clearly distinguishable. This could be accomplished through voluntary industry standards, State legislation, or Federal legislation.

The Surgeon General should consult with public and private agencies to develop, improve, and promote educational programs which would increase student awareness of alcoholic beverages and their effects

In addition to consulting with other HHS components, the Surgeon General should work with the U.S. Departments of Education, Transportation, and Justice, the alcoholic beverage industry, and public interest groups to implement this recommendation. The educational programs should include (1) teaching students about the total alcohol content of different beverages and (2) eliminating myths about wine coolers and beer.

TABLE OF CONTENTS

EXECUTIVE SUMMARY

INTRODUCTION 1

FINDINGS

Two out of three students cannot distinguish alcoholic beverages from non-alcoholic beverages 5

In most States, beer and other malt beverage labels do not disclose alcohol content 9

The alcohol content of beverages is a mystery to students 9

More than a third of all students do not know that Cisco contains alcohol 11

RECOMMENDATIONS 14

APPENDIX: Methodology and Beverage Selection

INTRODUCTION

PURPOSE

This inspection surveyed junior and senior high school (7th through 12th grade) students to determine their knowledge about alcoholic and non-alcoholic beverages.

BACKGROUND

In response to public health concerns and the adverse health consequences of alcohol abuse, Surgeon General Antonia Novello requested that the Office of Inspector General (OIG) survey youth to determine their views and practices regarding alcohol use. These concerns mirror one of Department of Health and Human Services (HHS) Secretary Louis Sullivan's goals which is to reduce the prevalence of alcohol problems among children and youth. The Surgeon General is particularly concerned about the similarities in the packaging of alcoholic and non-alcoholic beverages and young peoples' inability to distinguish between them. This is one of several reports prepared by the OIG relating to youth and alcohol.

The popularity of fruit-flavored alcoholic beverages skyrocketed in the 1980s

During the 1980s, alcoholic beverage companies introduced a variety of new products to the market. They offered consumers alcoholic beverages in a wide range of fruity flavors, vibrant colors, and attractive packaging. Introduced in 1981, **wine coolers** (1.5 to 6.0 percent alcohol by volume) are a mixture of wine and fruit juice or other flavoring, sometimes carbonated. Wine coolers offer consumers a sweet, fruity beverage with little or no alcohol taste. They are available in 12-ounce, screw-top bottles which are sold individually or in 4-packs. The most popular brands are Bartles & Jaymes and Seagram's.

The wine cooler market's explosive growth during its first 6 years prompted the liquor and beer industries to introduce **mixed drink coolers** (4.0 percent alcohol) and **fruit-flavored malt beverage coolers** (4.0 to 4.8 percent alcohol)[1] marketed in single-serve bottles. Bacardi Breezer, which looks and tastes much like a wine cooler, is an example of a mixed drink cooler. White Mountain Cooler is a malt beverage cooler available in flavors such as "Wild Raspberry," "Original Citrus," and "Cranberry Splash."

While not new to the 1980s, **fruit-flavored fortified wines** became more mainstream with the controversial marketing of Cisco (20.0 percent alcohol). Fortified wines--

[1] Alcohol content of malted beverages is commonly measured in alcohol weight, rather than alcohol volume. The malted beverage coolers we observed contain 3.2 to 4.0 percent alcohol by weight.

such as Thunderbird and Night Train--contain more alcohol than regular wines and historically have been considered "wino" beverages because they are inexpensive and available mainly in inner cities. Cisco offers consumers 20 percent alcohol fortified wine--4 to 5 times more than regular wine coolers--in popular wine cooler flavors such as peach, berry, and orange, marketed in bottles designed similarly to wine coolers. Cisco has become more widely available and popular than other fortified wines and now can be found displayed next to wine coolers not only in cities, but also in suburbs and smaller towns throughout the United States.

The Surgeon General has expressed an ongoing concern about Cisco because of its high alcohol content and potential for abuse. Cisco looks similar to wine coolers and has been implicated in a number of alcohol-related deaths and crimes, especially among youth. As a result, Dr. Novello has worked with the Federal Trade Commission to require Cisco to change its labeling and bottle shape, so it does not resemble a wine cooler.

While containing no alcohol, **mineral water with fruit juice or flavor** also became popular during the 1980s. These beverages offer a variety of fruit flavors in bottles that are very similar to the ones used for alcoholic coolers and Cisco. Brands include Sundance Sparkler and Mistic. While these alcoholic and non-alcoholic beverages offer a similar sweet, fruity flavor and are packaged and sold in attractively designed four-packs or single 12-ounce bottles, they are in fact very different. Mineral waters offer substitutes for soda pop. The coolers offer similar flavors with 4 to 6 percent alcohol. Cisco offers the same flavors with 20 percent alcohol.

METHODOLOGY

We randomly selected 8 States, 2 counties per State, 2 schools per county, and 30 students per school. The States were: California, Colorado, Florida, Illinois, Louisiana, New York, Ohio, and Pennsylvania. We completed structured interviews with a total of 956 junior and senior high school students.

We purchased alcoholic and non-alcoholic beverages from stores close to each school. During the interviews, we displayed a panel of these beverages and asked each student (1) whether each beverage did or did not contain alcohol, (2) which contained the most alcohol simply by looking at the bottles, and (3) which contained the most alcohol after reading the labels. We included Cisco in all interviews regardless of whether it was available in that area.

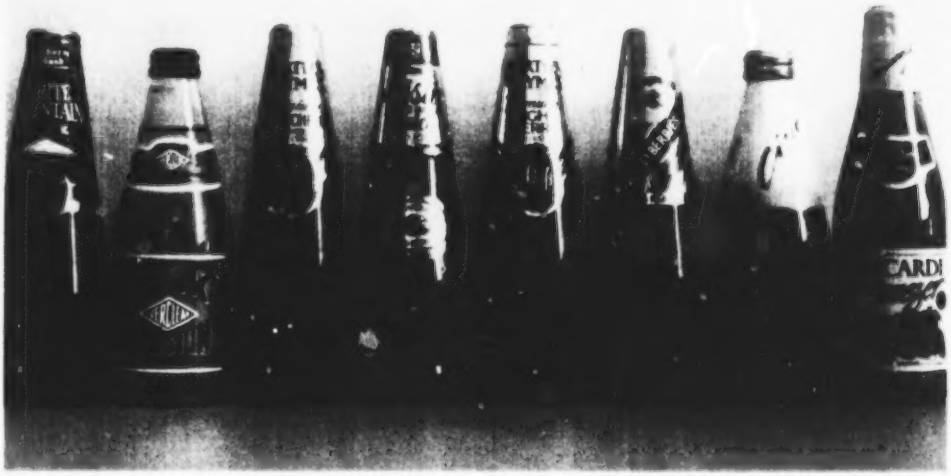
The appendix contains a more detailed description of our methodology and beverage selection.

◄ *Students were tested on their knowledge of dozens of similar-looking beverages.*

▲ *Interviewers displayed bottles and cans and observed students examining the beverages.*

BEST COPY AVAILABLE

CAN YOU TELL THE DIFFERENCE?



▲ *Pictured above are eight beverages representing six different types of drinks, with alcohol content ranging from 0 to 20 percent: wine coolers, a light wine cooler, a mixed drink cooler, a malted beverage cooler, a fortified wine, and a mineral water with juice. The shape of the bottle, color of the beverage, and label design are similar.*

◄ *Mistic Black Cherry, a mineral water with juice, is very similar to the Bartles & Jaymes Light Berry wine cooler in color and label design.*

BEST COPY AVAILABLE

FINDINGS

TWO OUT OF THREE STUDENTS CANNOT DISTINGUISH ALCOHOLIC BEVERAGES FROM NON-ALCOHOLIC BEVERAGES

Students confused alcoholic coolers with mineral waters that are similar in color, labeling, and packaging. Also, some alcoholic coolers are not clearly labeled as alcoholic. Students were most often confused by coolers that do not state clearly on the front of their labels what kind of beverages they are. An example is Bacardi Breezer (page 7).

Students correctly identified alcoholic beverages more often when shown clearly marked, popular, and well-advertised name-brand alcoholic beverages, especially beers and Bartles & Jaymes wine coolers. More than 60 percent of the students did not distinguish between alcoholic and non-alcoholic beer--such as Sharp's and O'Doul's. Although non-alcoholic beer contains less than 0.5 percent alcohol, some students assumed these products contained the same amount of alcohol as regular beer, because the popular Miller and Anheuser-Busch slogans appear directly under the product name.

Younger students were more likely to mistake an alcoholic beverage for a non-alcoholic one. Seventy-three percent of students ages 15 and younger erred or did not know that at least one of the alcoholic beverages contained alcohol. Sixty percent of those 16 and older made the same mistake.

PERCENT ANSWERING INCORRECTLY OR "DON'T KNOW" TO THE QUESTION, "DOES THIS CONTAIN ALCOHOL?"

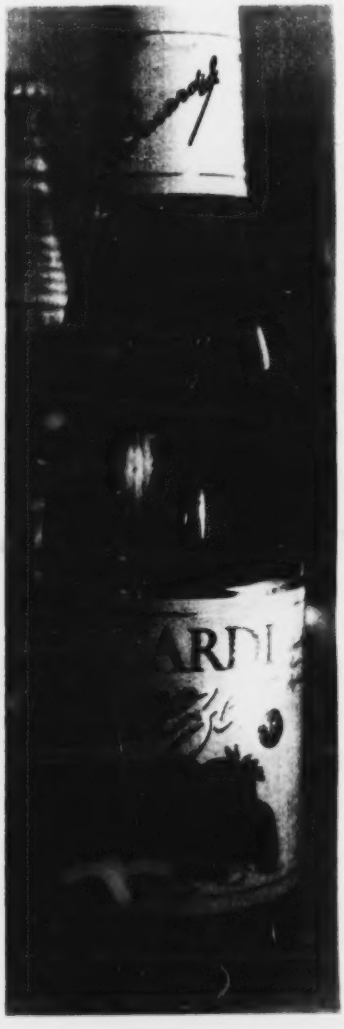
Tropical Passion, Pink Passion, Purple Passion (wine cooler or liquor)	*61.3%*
Cisco (fortified wine)	*36.0*
Bacardi Breezer (mixed drink cooler)	*25.5*
White Mountain (malted beverage cooler)	*18.0*
Bartles & Jaymes (wine cooler)	*9.6*
Schlitz (malt liquor)	*8.8*
Michelob (beer)	*4.2*
Miller, Miller Genuine Draft (beer)	*4.1*
Budweiser (beer)	*1.2*
Colt '45 (malt liquor)	*0.7*

Students sometimes believed that mineral waters with juice contained alcohol. Several brands of mineral water now use foil labels to cover the cap. This gives them an appearance similar to some alcoholic beverages. Thirty-four percent of all students failed to identify mineral waters as non-alcoholic.

The similar appearance of alcoholic coolers and mineral waters has been used by students to fool retail clerks into selling them alcoholic beverages, according to one junior high school teacher. In one area, students place wine coolers into mineral water four-pack containers. Because of their similar appearance, the clerks fail to notice that the beverages have been switched.

On average, students were unable to distinguish between alcoholic and non-alcoholic beverages 3 out of 10 times.

SNAPSHOT SUMMARY -- BACARDI BREEZER



▲ *Although Bacardi is a popular brand of rum, 25 percent of the students did not know that Bacardi Breezer contains alcohol. The product name and the fruit collage are emphasized on the front label.*

◄ *The only obvious mention of Bacardi Breezer containing alcohol is the small, cursive "Bacardi Rum Refresher" printed next to the title. The beige alcohol content is almost invisible compared to the rest of the label.*

▼ *The ingredient listing is also difficult to read when compared to the rest of the label.*

SNAPSHOT SUMMARY: STUDENTS WERE FOOLED BY "PASSION"

◄ *More than 61 percent of all students did not know that Pink Passion, Tropical Passion, and Purple Passion contain alcohol. Consumers can tell that Passion beverages contain alcohol by the ingredients, but the front of the label offers no help. Nowhere on the bottle does Passion tell the consumer exactly what kind of beverage it is. In fact, two types of Passion exist. One is a wine cooler often made with "substandard wine." The other is a liquor made with Everclear, a grain alcohol illegal in many States. Alcohol content varies between 5.0 and 6.0 percent. The only way to tell the difference between the wine cooler and the liquor is to read the ingredients.*

▼ *These beverages also are available in two litre bottles--like soda pop--with a free promotional 32-ounce plastic bottle attached.*

► *Anybody could pick up a cardboard four-pack and not know that it contains alcohol.*

IN MOST STATES, BEER AND OTHER MALT BEVERAGE LABELS DO NOT DISCLOSE ALCOHOL CONTENT

Although the alcohol content of beer and other malt beverages vary by State and brand, consumers cannot tell by looking at the can or bottle how much alcohol they are consuming. Beers generally contain 4.0 to 4.8 percent alcohol by volume.

Although malt liquor has more alcohol than beer, it is impossible to tell by the labeling. Malt liquor may contain up to twice as much alcohol (8.0 percent) as regular beer and fruit-flavored malt coolers.

Federal law prohibits beer and other malt liquor beverage companies from disclosing alcohol content on labels, but it permits States to require disclosure.[2] According to one State liquor control official, this law was enacted after prohibition to prevent beer and malt liquor companies from using alcohol content to attract consumers. These companies oppose State laws because they would be required to manufacture different labels for States that require disclosure. Washington State's Liquor Control Board recently passed a rule requiring alcohol content disclosure, but has encountered "enormous" resistance from microbreweries and foreign manufacturers. "It's virtually impossible to do anything at the State level," said a Washington State liquor control official, citing industry opposition.

THE ALCOHOL CONTENT OF BEVERAGES IS A MYSTERY TO STUDENTS

Less than one of six students identified the beverage containing the most alcohol when shown the panel of beverages. Students were most likely to select beer (42.7 percent of students) and malt liquor (18.2 percent) as having the most alcohol, although Cisco (16.0 percent) contains two to five times more alcohol than either. Even after being allowed to read the labels on all cans and bottles, less than half correctly identified the beverage containing the most alcohol. This is due to (1) the students' inability to understand the labels and (2) the labels' lack of clarity.

As discussed in the OIG report "Youth and Alcohol: A National Survey--Drinking Habits, Access, Attitudes, and Knowledge" (OEI-09-91-00652), students do not know the relative strengths of different alcoholic beverages. Almost 80 percent of the students did not know that a shot of liquor has the same amount of alcohol as a can of beer. Approximately 55 percent did not know that a glass of wine and a can of beer have similar alcohol content. Students were especially unaware of the alcohol content of wine coolers, even though coolers are favored almost two to one by students who drink alcohol. Some students stated that they or their classmates prefer wine coolers over other alcoholic beverages because "they contain less alcohol."

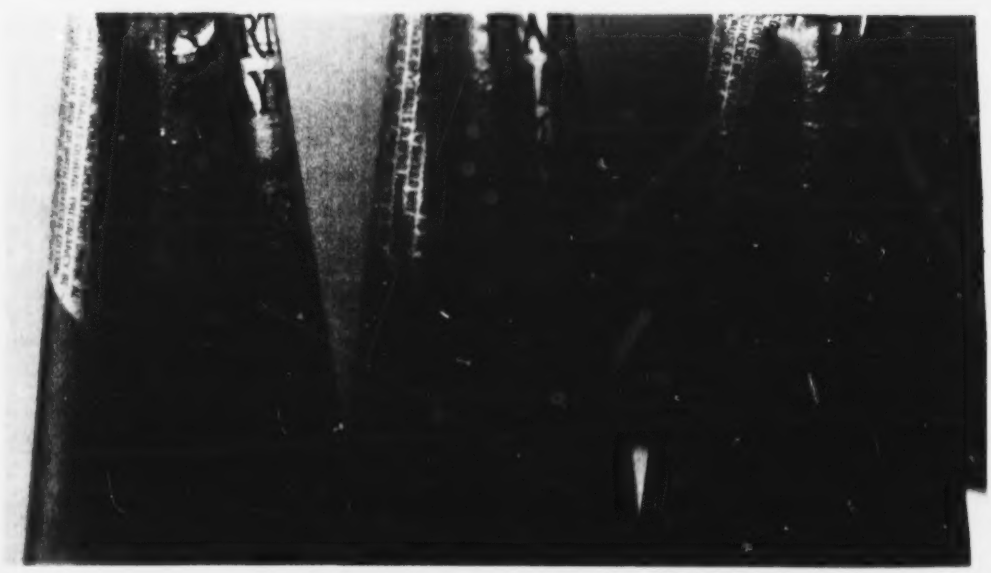
---

[2]27 USC § 205(e)

Some students had difficulty determining total alcohol content because some beverages do not display it prominently. For an example, see the Bartles & Jaymes example below.

The box on page 13 describes students' two drinks of choice: wine coolers and beer.[3]

SNAPSHOT SUMMARY: BARTLES & JAYMES



Although students recognized Bartles & Jaymes wine coolers, they often had difficulty determining how much alcohol these coolers contain. One reason was the location and size of the alcohol content listing, located on one of the stripes leading towards the "BJ" crest logo.

[3]For a full discussion on student beverage preferences, see "Youth and Alcohol: A National Survey--Drinking Habits, Access, Attitudes, and Knowledge," (OEI-09-91-00652).

Why were more than half of the students unable to identify the beverage containing the most alcohol even after reading the labels? We observed that:

- *many students had difficulty or could not find alcohol content listed on alcoholic beverages;*
- *beer and malt liquor do not disclose alcohol content. While some students knew that malt liquor contains more alcohol than beer, others made no distinction between the two. Even after discovering that Cisco contained 20 percent alcohol, more than 25 percent of the students believed that beer and/or malt liquor contained more alcohol;*
- *some students could not comprehend the labeling, despite reading it closely; and*
- *some students had solid, preconceived ideas which could not be changed about which beverage contained the most alcohol.*

MORE THAN A THIRD OF ALL STUDENTS DO NOT KNOW THAT CISCO CONTAINS ALCOHOL

Thirty-six percent of the students did not know that Cisco contains alcohol. Even after reading the labels, less than half of the students knew that Cisco contains the most alcohol of any drink in the panel. In fact, it contains at least two-and-a-half times more alcohol than any of the other beverages.

The warning on new Cisco bottles, "This is not a wine cooler," confused some students. "I thought 'This is not a wine cooler' meant it didn't have alcohol," said one student. In other regions of the country, Cisco bottles did not contain this warning.

Although Cisco is not available in all areas, students have found ways to obtain it. For example, students in Philadelphia purchase Cisco from "speakeasies" or "speakies," illegal operations that provide students with Cisco as well as other alcoholic beverages.

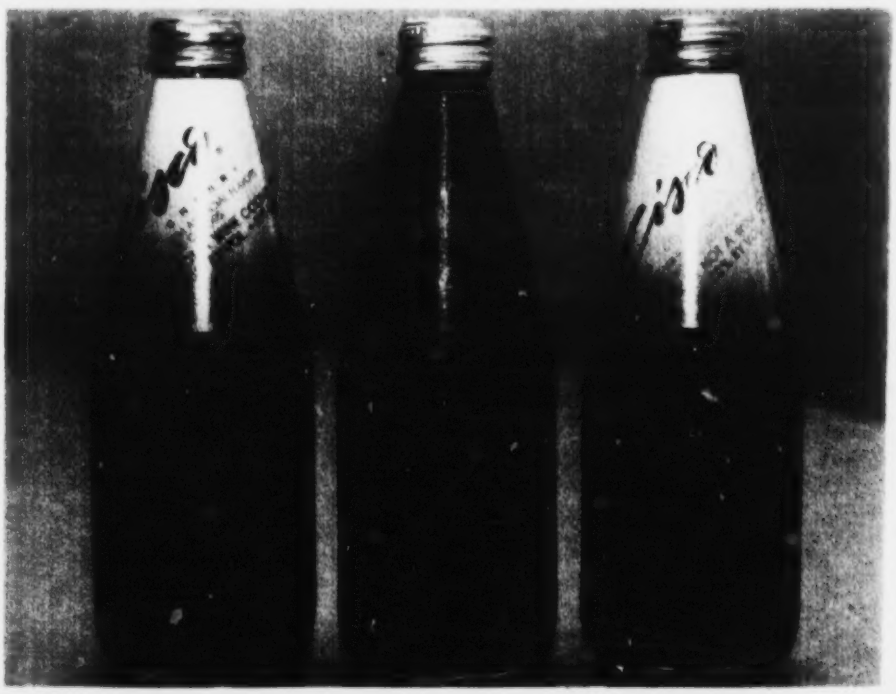
Students related stories about Cisco which emphasize not only its danger, but also its popularity. Among the stories we heard:

- "I know a lot of people that blacked out (after drinking Cisco)."
- "One girl tasted it, said it tasted like Kool-Aid, and drank it fast."

- "It's good to buy one for four people. It's strong. Sometimes you just have a couple of dollars and need to get drunk."

- "Some people pass out. It tastes good. I know a girl who drank two bottles and died. It can really get you messed up."

SNAPSHOT SUMMARY: CISCO "TAKES STUDENTS BY SURPRISE"



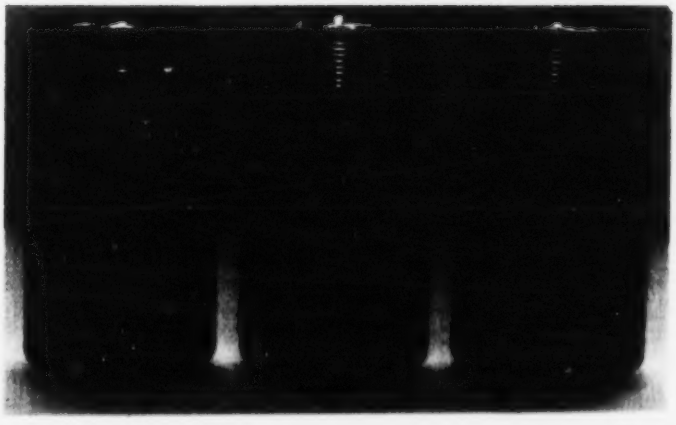
Although Cisco has changed its labeling, we found the old bottle (pictured here in the middle) still available in several areas. While many students were unfamiliar with Cisco, others described it as the drink of choice for them or their friends. "I've seen 10- and 11-year-old kids drink it," said one student. "It makes you wild."

BEST COPY AVAILABLE

BEER VS. WINE COOLERS: A COMPARISON

WINE COOLERS -- DRINK OF CHOICE

Wine coolers are the alcoholic drink of choice for students. Most students knew that Bartles & Jaymes Wine Coolers contain alcohol because they recognized the brand, and the words "wine cooler," although small, are printed clearly on the front of the bottle.



Students knew popular beers, such as Budweiser, Miller, and Michelob. However, many students had no idea how much alcohol beer contains. As a result, even after learning that Cisco contains 20 percent alcohol, 28 percent of all students still believed that beer, malt liquor, and/or non-alcoholic beer contain more alcohol than Cisco. This problem is exacerbated by popular myths among students that beer is "stronger" than wine coolers.

BEER -- THE MOST POTENT DRINK?

BEST COPY AVAILABLE

RECOMMENDATIONS

THE SURGEON GENERAL SHOULD WORK WITH BEVERAGE INDUSTRY, STATE, AND FEDERAL OFFICIALS TO IMPROVE THE LABELING AND PACKAGING OF ALCOHOLIC AND NON-ALCOHOLIC BEVERAGES

A coordinated effort should ensure that (1) total alcohol content of all beverages--including beer and malt liquor--is clearly displayed and understandable and (2) alcoholic and non-alcoholic beverages are clearly distinguishable.

In order to accomplish this, it may be necessary to seek repeal of the Federal law prohibiting disclosure of alcohol content on beer containers. Other options would be to convince States to enact legislation requiring content disclosure or to seek voluntary industry standards.

THE SURGEON GENERAL SHOULD CONSULT WITH PUBLIC AND PRIVATE AGENCIES TO DEVELOP, IMPROVE, AND PROMOTE EDUCATIONAL PROGRAMS WHICH WOULD INCREASE STUDENT AWARENESS OF ALCOHOLIC BEVERAGES AND THEIR EFFECTS

This recommendation is similar to one that appears in the OIG report entitled "Youth and Alcohol: A National Survey--Drinking Habits, Access, Attitudes, and Knowledge." In addition to consulting with other HHS components, the Surgeon General should work with the U.S. Departments of Education, Transportation, and Justice, the alcoholic beverage industry, and public interest groups to implement this recommendation. The educational programs should include (1) teaching students about the total alcohol content of different beverages and (2) eliminating myths about wine coolers and beer.

APPENDIX

METHODOLOGY AND BEVERAGE SELECTION

METHODOLOGY

Sampling Methodology

The sample for this inspection was drawn in four stages.

At the first stage, a cluster of eight States out of the nation was selected at random, without replacement, with probability proportionate to size. That is, for this level, size, defined as the number of schools in each State, was used as the weighting factor for the selection of the eight States. The universe of schools was limited to secondary schools (junior high or senior high) and Kindergarten through 12th grade schools.

The second stage involved selecting a cluster of counties within each of the eight States. Two counties were selected from each sampled State for a total of 16 counties. These counties were also selected with probability proportionate to size. However, the size for this stage was determined by the number of students in the county in grades seven through twelve.

Once counties were selected, a simple random sample of schools within the county was chosen. Two schools per county were sampled for a total of 32 schools.

The final stage of sampling was the selection of students in the schools. A sample of thirty students per school was desired. However, 42 were initially selected to allow for absentees and refusals. The schools were instructed to alphabetize a list of all students in grades 7 through 12. Then the total number of students on the list was divided by 42 and rounded to the nearest whole number (n). Students were then selected by counting every nth one on the list until the entire list was exhausted. In many cases, more than the required thirty students were available to participate. The schools were instructed to randomly subsample to obtain a final sample of 30. This final sample size was achieved in all but a few schools. However, in no school were less than 27 students interviewed. The total sample for this inspection was 956 students.

Weighting Procedure

Since the sample was selected with four different stages and a different set of probabilities at each stage, weighting of the respondents was standardized through a five-step process based on sample size and the universe. Although the first two stages of selection employed probability proportionate to size, the measure of size

differed between the two stages. In the first stage the measure of size was number of schools while the measure of size for the second stage was number of students. The third and fourth stages involved taking simple random samples of schools and then students. To provide a uniform unit of selection so that accurate weights could be determined, the number of students, known at each of the four stages, was used for purposes of weighting the sample.

Overall, there were 32 distinct weights used to project to the universe--one for each school. These weights were applied to every student in the school and were computed as follows:

(1) In weighting from the students to the school, the population in the school was divided by the sample in the school. There were 32 different weighting factors for this phase.

(2) The second weighting factor was determined by dividing the number of students in the county by the sum of students in the two schools that were chosen. There were 16 different weighting factors used in projecting to the county level.

(3) In the third stage, the weight was computed by dividing the number of students in the State by the sum of students in the two counties that were chosen. There were 8 weighting factors (one for each State) at this stage.

(4) For the final stage, the weight was calculated by taking the number of students in the universe and dividing by the number of students in all eight States combined, for one weighting factor to project to the universe.

(5) The weight at each of these four stages was multiplied together to obtain the 32 unique weighting factors.

Adjustments to Weights

It was determined, subsequent to data collection, that the 956 students interviewed were disproportionately distributed when compared to the estimated national population. Using data provided by the Department of Education, we determined that the data needed to be reweighted to appropriately reflect this national population. The table below shows the distribution of the national population and sample with respect to race and grade, including the adjusted weights.

DISTRIBUTION OF POPULATION AND SAMPLE WITH RESPECT TO GRADE

GRADE	UNWEIGHTED SAMPLE	ADJUSTED WEIGHTED SAMPLE	POPULATION
7	21.40%	12.90%	13.03%
8	27.10%	12.10%	12.04%
9	14.70%	23.20%	23.32%
10	12.70%	21.40%	20.96%
11	12.40%	17.10%	17.20%
12	11.50%	13.40%	13.42%

DISTRIBUTION OF POPULATION AND SAMPLE WITH RESPECT TO RACE

RACE	UNWEIGHTED SAMPLE	ADJUSTED WEIGHTED SAMPLE	POPULATION
WHITE	58.20%	70.20%	69.35%
BLACK	29.30%	15.40%	15.36%
HISPANIC	8.40%	10.50%	10.20%
INDIAN	0.20%	0.40%	1.04%
ASIAN	3.40%	3.40%	3.43%
OTHER	0.70%	-	-

As can be seen from the above two tables, there is a difference between the unweighted sample and population distributions with respect to both race and grade. Using a cross tabulation of race and grade, compiled for the population and the sample, the adjusted weights were constructed. These adjustments were made based on the proportions found in the sample compared with the population. For example, since whites were under sampled and blacks were over sampled, the responses were weighted more heavily for whites and less for blacks. This adjustment brought the sample in line with the national population.

The differences between the adjusted proportions and the unweighted proportions in the sample are mainly due to the following:

(1) In general, the sample selected proportionately more 7th and 8th graders than are found in the population and,

(2) The sample selected proportionately more non-white students than are present in the national population.

Structured Interview Questions

We asked students three questions:

(1) **Imagine you are at a store and you saw these bottles on a shelf. Please tell me whether you believe each one does or does not contain alcohol. It is okay if you do not know.**

(2) **Now, just by looking at the bottles (not touching), which of these, if any, do you think contains the most alcohol?**

(3) **Now you can touch and read the labels. Which of these, if any, do you think contains the most alcohol?**

BEVERAGE SELECTION

Interviewers purchased the survey beverages in the communities where the interviews were conducted. Cisco was the only exception. Cisco was used in all interviews regardless of whether it was available in the community because of the Surgeon General's work with the FTC to require Cisco to change its packaging. Interviewers were instructed to find beverages in 10- to 16-ounce containers. Interviewers attempted to purchase one of each of the following:

Mixed drink cooler
Wine cooler
Light wine cooler
Mineral water with juice
Non-light beer
Non-alcoholic beer
Malt liquor

Not all beverages were available in each community. In several communities malt liquor was available in 40-ounce bottles only.

The interviewers also purchased up to three other alcoholic or non-alcoholic beverages at their discretion. Interviewers were instructed to look for additional beverages that closely resembled others in the panel.

BEVERAGES USED DURING THE INTERVIEWS

MIXED DRINK COOLERS

Bacardi Breezer Calypso Berry
Bacardi Breezer Key Lime

WINE COOLERS

Bartles & Jaymes Berry
Bartles & Jaymes Black Cherry
Bartles & Jaymes Light Berry
Bartles & Jaymes Red Sangria
Pink Passion
Purple Passion
Tropical Passion
Seagram's Wild Berries

MALT BEVERAGE COOLERS

White Mountain Cooler

MINERAL WATER WITH FRUIT JUICE

Chapelle Pear
La Croix Natural Orange
Mistic Berry
Mistic Tropical Passion
Sundance Sparkler Concord Twist
Sundance Sparkler Cranberry
Sundance Sparkler Raspberry
Walleroo

BEER

Budweiser
Lowenbrau
Michelob
Miller Genuine Draft
Miller High Life
Regal Select

NON-ALCOHOLIC BEER

Kingsbury
O'Doul's
Sharp's
Texas Light Non-Alcoholic

MALT LIQUOR

Colt '45
Elephant (Danish)
Olde English 800
Schlitz

COCKTAILS

Club Martini

FRUIT JUICES

Everfresh Cranberry-Apple

SODA POP

Faygo Redpop

FORTIFIED WINE

Cisco Berry
Cisco Black Cherry
Cisco Peach
Cisco Regular (Grape)